EXHIBIT E

CONFIDENTIAL
SUBJECT TO ORDER GOVERNING PROCEEDINGS (DKT. NO. 22)

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-533-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-534-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-535-ADA

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-536-ADA

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-537-ADA

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-538-ADA

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-539-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-540-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § §	NO. 6:20-CV-541-ADA

CONFIDENTIAL
SUBJECT TO ORDER GOVERNING PROCEEDINGS (DKT. NO. 22)

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES CO. LTD., ET AL. Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-542-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI INVESTMENT & HOLDING CO., LTD., Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-543-ADA
WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI INVESTMENT & HOLDING CO., LTD., Defendants.	§ § § § § § § § § § § §	NO. 6:20-CV-544-ADA

HUAWEI'S PRELIMINARY INVALIDITY CONTENTIONS

I. INTRODUCTION

Pursuant to the Scheduling Order, Defendants (collectively "Huawei" or "Defendants")

hereby disclose their Preliminary Invalidity Contentions ("Invalidity Contentions") with respect to the patent claims asserted by Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development ("Plaintiff") in its Preliminary Infringement Contentions ("Infringement Contentions") served on October 9, 2020. Plaintiff asserts infringement of the following claims:

- Claims 1-4, 6, 7, 10, 18, 22, 29, 30 of U.S. Patent No. 6,882,627 ("**the 627 Patent**")
- Claims 1, 3-6 of U.S. Patent No. 7,095,713 ("**the 713 Patent**")
- Claims 1, 3-5, 7, 8, 10, 12, 13, 15, 16, 18, 20, 22, 23, 25 of U.S. Patent No. 7,508,755 ("**the 755 Patent**")
- Claims 1, 3, 4, 6, 7 of U.S. Patent No. 7,515,546 ("**the 546 Patent**")
- Claims 1-27 of U.S. Patent No. 7,860,512 ("**the 512 Patent**")
- Claims 1, 4, 9, 12 of U.S. Patent No. 7,872,973 ("**the 973 Patent**")
- Claims 1-15 of U.S. Patent No. 8,200,224 ("**the 224 Patent**")
- Claims 1, 2, 11 of U.S. Patent No. 8,417,112 ("**the 112 Patent**")
- Claims 1-18 of U.S. Patent No. 9,084,199 ("**the 199 Patent**")
- Claims 1, 4, 5, 15 of U.S. Patent No. 8,249,446 ("**the 446 Patent**")
- Claims 1, 4-7 of U.S. Patent No. 6,999,727 ("**the 727 Patent**")
- Claims 1-20 of U.S. Patent No. 8,429,480 ("**the 480 Patent**")

(collectively referred to as "**the Asserted Claims**" and "**the Asserted Patents**")

Huawei hereby provides its invalidity disclosures and related production of documents pertaining only to the Asserted Claims as identified by Plaintiff in their Infringement Contentions. With respect to each asserted claim and based on its investigate to date, Huawei hereby: (a) identifies each currently known item of prior art that either anticipates or renders obvious each asserted claim; (b) submits a chart identifying where each element in each asserted claim is found

(c) identifies any limitations that Huawei contends are indefinite under 35 U.S.C. § 112 ¶ 2 (pre-AIA) or lack enablement or written description under 35 U.S.C. § 112 ¶ 1 (pre-AIA), and (d) identifies any claims that Huawei contends are directed to ineligible subject matter under 35 U.S.C. § 101. Huawei further relies on and incorporates all prior art references and/or technology cited and/or admitted in the Asserted Patents and their respective prosecution histories and prosecution histories of the foreign counterpart of the Asserted Patents. Huawei further relies on and incorporates by reference, as if originally set forth herein, all invalidity positions, and all associated prior art and claim charts, disclosed to Plaintiff by potential or actual licensees to any of the Asserted Claims. Huawei hereby discloses and identifies as if originally set forth herein, all prior art references listed and/or asserted in the above as invalidating prior art against each of the Asserted Claims.

In addition, based on its investigation to date Huawei hereby produces the documents currently in its possession, custody, or control requirement to accompany these Invalidity Contentions in accordance with the Scheduling Order.

II. RESERVATION OF RIGHTS

Huawei hereby provides its Invalidity Contentions and related documents pertaining only to the Asserted Claims as identified by Plaintiff in its Infringement Contentions. Huawei reserves the right to modify, amend, or supplement these Invalidity Contentions to show the invalidity of any additional claims that the Court may allow Plaintiff to later assert. These Invalidity Contentions are prepared and served in response to Plaintiff's Infringement Contentions. Plaintiff's Infringement Contentions are insufficient as they lack proper and complete disclosure as to how Huawei allegedly infringes the Asserted Claims. Huawei reserves the right to modify,

amend, or supplement these Invalidity Contentions should Plaintiff correct, clarify, or supplement its Infringement Contentions.

Huawei's Invalidity Contentions and selection of documents accompanying them are based on information currently available to Huawei and subject to further revision. For example, Plaintiffs (or their counsel) may be in possession of prior art that has not been disclosed to Huawei. As another example, because discovery has not begun, Huawei reserves the right to amend or supplement the information provided herein, including identifying and relying on additional references.

Huawei makes no explicit or implicit expression of any position regarding claim construction in these Invalidity Contentions. Any statement herein describing or tending to describe any claim element is provided solely for the purpose of understanding the relevant prior art. Moreover, by including specific prior art references in these Invalidity Contentions based on a particular construction of the Asserted Claims, including the construction apparently applied by Plaintiff in its Infringement Contentions, Huawei does not adopt or concede the accuracy of any such construction. Also, Huawei objects to the any attempt to infer claim construction for any identified of potential prior art. In instances where Huawei asserts that the Asserted Claims are invalid under 35 U.S.C. § 112 (pre-AIA) (e.g., no written description, not enabled, or indefinite), Huawei has applied the prior art in accordance with its assumption that Plaintiff contends such Asserted Claims are (1) definite, (2) have written description support, and (3) are enabled. However, Huawei's Invalidity Contentions do not represent its agreement or view as to the meaning, definiteness, written description support for, or enablement of any asserted claim. These Invalidity Contentions and accompanying documents are not intended to reflect Huawei's claim

construction positions, which will be disclosed in accordance with the Court's Scheduling Order. Huawei specifically reserve the right to contest any claim construction advanced by Plaintiff.

Huawei's contentions may change depending on the Court's construction of the Asserted Claims, any findings as to the priority date of the Asserted Claims, and/or positions that Plaintiff or its expert witness(es) may take concerning claim construction, infringement, and/or invalidity issues. Prior art not included in this disclosure, whether known or unknown to Huawei, may become relevant. In particular, Huawei is currently unaware of the extent, if any, to which Plaintiff will contend that limitations of the Asserted Claims are not disclosed in the prior art identified by Huawei, or will contend that any of the identified references do not qualify as prior art. To the extent that such an issue arises, Huawei reserves the right to identify other references that, *inter alia,* would have made the addition of the allegedly missing limitation to the disclosed device or method obvious.

The identification of any patent or patent publication shall be deemed to include any counterpart patent or application filed, published, or issued anywhere in the world. The identification of any specifications published by any standard-setting organization shall be deemed to include any earlier or later version of the specifications with the same or similar disclosures. The citation to any specifications published by standard-setting organizations shall be deemed to include any product that implements such specifications and that would qualify as prior art under 35 U.S.C. § 102, e.g., under Section 102(a), 102(b), or 102(g)(2) (all pre-AIA).

Huawei's claim charts cite to particular teachings and disclosures of the prior art as applied to features of the Asserted Claims. However, persons of ordinary skill in the art may view an item of prior art in the context of other publications, literature, products, and understanding. As such, the cited portions are only exemplary, and Huawei reserves the right to rely on uncited portions of

the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that the prior art discloses a claim limitation. Huawei further reserves the right to rely on uncited portions of the prior art references, other publications, and testimony to establish bases for combinations of certain cited references that render the Asserted Claims obvious. Further, for any combination, Huawei reserves the right to rely additionally on information generally known to those skilled in the art or common sense.

The references discussed in the claim charts may disclose the elements of the Asserted Claims explicitly or inherently, or they may be relied upon to show the state of the art in the relevant time frame. The suggested obviousness combinations are provided in the alternative to Huawei's anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

Huawei reserves the right to challenge any claim that any respective Asserted Claim is entitled to a priority date earlier than the filing date of the Asserted Patents. Defendant further reserves the right to seek discovery regarding any alleged conception and reduction to practice dates, as appropriate, and to demonstrate earlier invention by other parties under 35 U.S.C. § 102(g) (pre-AIA).

Huawei further reserves the right to take discovery on the issues of improper inventorship and/or derivation under 35 U.S.C. § 102(f) (pre-AIA), public use and/or the on-sale bar under 35 U.S.C. § 102(b) (pre-AIA), improper foreign or domestic priority date of any Asserted Patents, and/or applicants' failure to comply with 35 U.S.C. § 112 (Pre-AIA). Defendant accordingly reserves all rights to further supplement or amend these Invalidity Contentions if and when further information is discovered or becomes available.

Where Huawei identifies a particular figure in a prior art reference, that identification encompasses the caption and description of the figure as well as any text relating to the figure in addition to the figure itself. Similarly, where an identified portion of text refers to a figure or other material, that identification encompasses the referenced figure or other material as well.

III. INVALIDITY CONTENTIONS

A. Contentions under 35 U.S.C. §§ 102 (pre-AIA) and 103 (pre-AIA)

Pursuant to the Scheduling Order, and subject to Huawei's reservation of rights, Huawei identifies each item of prior art that anticipates or renders obvious one or more of the Asserted Claims.

1. 627 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 627 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date(s)	Short Name
U.S. 7,031,299	Filed: January 26, 2001; Issued: April 18, 2006	Chaudhuri
U.S. 5,856,981	Filed: May 15, 1997; Issued: January 5, 1999	Voelker
U.S. 6,847,607	Filed: June 1, 2000; Issued: January 25, 2005	Kasdan
U.S. 8,103,789	Filed: March 1, 2001; Issued: January 24, 2012	Gan
U.S. 6,256,295	Filed: September 25, 1997; Issued: July 3, 2001	Callon
U.S. 6,947,376	Filed: October 21, 1999; Issued: September 20, 2005	Deng
U.S. 5,872,773	Filed: May 17, 1996; Issued: February 16, 1999	Katzela
U.S. 5,983,274	Filed: May 8, 1997; Issued: November 9, 1999	Hyder
U.S. 2006/0051090	Filed: March 12, 2001; Published: March 9, 2006	Saniee
U.S. 2001/0032271	Filed: December 27, 2000;	Allen

	Published: October 18, 2001	
U.S. 2002/0097671	Provisional filed: December 21, 2000; Published: July 25, 2002	Doverspike-671
U.S. 2002/0112072	Provisional filed: February 12, 2001; Published: August 15, 2002	Jain-072
CA2220469	Filed: November 7, 1997; Published: February 13, 2001	Iwata
EP0936547	Filed: February 1, 1999; Published: August 18, 1999	Boggs

Publication	**Date(s)**	**Short Name**
Capacity Performance of Dynamic Provisioning in Optical Networks	Published: January 2001	Ramamurthy
IP Over Optical Networks: A Framework	No later than May 24, 2001	Rajagopalan
Restoration Services for the Optical Internet	October 5, 2000	Hjalmtysson
Disjoint Paths in a Network	1974	Suurballe
Survivable Networks: Algorithms for Diverse Routing	1999	Bhandari

2. 713 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 713 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	**Date(s)**	**Short Name**
U.S. 4,679,189	Filed: November 27, 1985; Issued: July 7, 1987	Olson
U.S. 2002/0184387	Filed: May 28, 2002; Published: December 5, 2002	Yamaya
U.5. 5,303,078	Filed: June 22, 1992; Issued: April 12, 1994	Brackett
U.S. 6,978,459	Filed: April 13, 2001; Issued: December 20, 2005	Dennis
U,S. 2003/0202520	Filed: April 26, 2002; Published: October 30, 2003	Witkowski
U.S. 2002/0067693	Provisional filed: October 12, 2000; Published: June 6, 2002	Kodialam
U.S. 5,586,112	Filed: December 13, 1994;	Tabata

	Issued: December 17, 1996	
U.S. 5,590,119	Filed: August 28, 1995; Issued: December 31, 1996	Moran
U.S. 6,882,626	Filed: June 1, 2000; Issued: April 19, 2005	Marathe
U.S. 7,120,151	Filed: September 27, 2001; Issued: October 10, 2006	Ginjpalli
U.S. 2001/0030945	Filed: February 8, 2001; Published: October 18, 2001	Soga
U.S. 2003/0135642	Filed: December 21, 2001; Published: July 17, 2003	Benedetto
U.S. 6,032,194	Filed: December 24, 1997; Issued: February 29, 2000	Gai
U.S. 6,678,241	Filed: November 30, 1999; Issued: January 13, 2004	Gai241
U.S. 7,061,875	Filed: December 7, 2001; Issued: June 13, 2006	Portolani
U.S. 7,881,208	Filed: June 18, 2001; Issued: February 1, 2011	Nosella
WO 2003/085900	Filed: March 25, 2003; Published: October 16, 2003	Lee
EP1111860	Filed: December 15, 2000; Published: June 27, 2001	Fredette
FR2836314A1	Filed: February 21, 2002 Published: August 22, 2003	Louis

Publication	**Date(s)**	**Short Name**
Designing High-Performance Campus Intranets with Multilayer Switching	No later than September 3, 2000	Haviland
Catalyst 2950 Desktop Switch Software Configuration Guide	No later than February 28, 2003	Catalyst
Cisco Systems, Catalyst 2950 Desktop Switch Software Configuration Guide (Nov. 2002)	Published: November 2002	Catalyst2
Fast Reroute Techniques in RSVP-TE	Published: October 2001	Pan

3. 755 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 755 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 7,093,027	Filed: July 23, 2002; Issued: August 15, 2006	Shabtay-027
U.S. 7,345,991	Filed: May 28, 2003; Issued: March 18, 2008	Shabtay-991
U.S. 7,944,817	Filed: October 7, 2002; Issued: May 17, 2011	Sylvain
U.S. 7,804,767	Filed: October 25, 2000; Issued: September 28, 2010	Owens
U.S. 6,970,417	Filed: December 28, 1999; Issued: November 29, 2005	Doverspike-417
U.S. 2004/0076151	Filed: October 21, 2002; Published: April 22, 2004	Fant
U.S. 2003/0189898	Filed: April 4, 2002; Published October 9, 2003	Cedell
U.S. 2002/0093954	Filed: July 2, 2001; Published: July 18, 2002	Weil
U.S. 2002/0112072	Filed: February 7, 2002; Published: August 15, 2002	Jain-072
U.S. 2003/0126287	Filed: January 2, 2002; Published: July 3, 2003	Charny
U.S. 2003/0112749	Filed: December 18, 2002; Published: June 19, 2003	Hassink

Publication	Date(s)	Short Name
RSVP-TE Extensions in Support of End-to-End GMPLS-based Recovery	February 2003	Lang
RSVP-TE Extensions in Support of End-to-End GMPLS-based Recovery	May 2003	Lang II
Adding QoS Protection in Order to Enhance MPLS QoS Routing	May 2003	Marzo
Link Failure Recovery for MPLS Networks with Multicasting	August 2002	Pointurier

4. 546 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 546 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 6,981,036	Filed: June 6, 2000; Issued: December 27, 2005	Hamada
U.S. 6,442,144	Filed: June 15, 1998; Issued: August 27, 2002	Hansen
U.S. 5,185,860	Filed: May 3, 1990; Issued: February 9, 1993	Wu
U.S. 6,272,537	Filed: November 17, 1997; Issued: August 7, 2001	Kekic
U.S. 6,377,987	Filed: April 30, 1999; Issued: April 23, 2002	Kracht
U.S. 6,040,834	Filed: December 31, 1996; Issued: March 21, 2000	Jain-834
U.S. 6,173,323	Filed: December 24, 1997; Issued: January 9, 2001	Moghe
U.S. 7,200,651	Filed: July 2, 1999; Issued: April 3, 2007	Niemi
U.S. 5,958,012	Filed: July 15, 1997; Issued: September 28, 1999	Battat
U.S. 6,047,279	Filed: November 17, 1997; Issued: April 4, 2000	Barrack
U.S. 7,139,823	Filed: August 23, 2001; Issued: November 21, 2006	Benfield
U.S. 6,496,859	Filed: November 25, 1998; Issued: December 17, 2002	Roy
U.S. 6,795,403	Filed: March 31, 2000; Issued: September 21, 2004	Gundavelli
U.S. 6,076,106	Filed: January 30, 1998; Issued: June 13, 2000	Hamner
U.S. 5,978,845	Filed: Mar. 25, 1997; Issued: Nov. 2, 1999	Reisacher
U.S. 6,539,540	Filed: May. 24, 1999; Issued: Mar. 25, 2003	Noy
U.S. 5,710,885	Filed: Nov. 28, 1995; Issued: Jan. 20, 1998	Bondi

U.S. 7,272,644	Filed: Sep. 29, 2000; Issued: Sep. 18, 2007	Kumar
U.S. 2003/0005100	Filed: June 28, 2001; Published: January 2, 2003	Barnard
U.S. 2002/0032761	Filed: January 29, 2001; Published: March 14, 2002	Aoyagi
U.S. 2002/0174198	Filed: May 16, 2001; Published: November 21, 2002	Halter
U.S. 2002/0156920	Filed: April 20, 2001; Issued: October 24, 2002	Conrad
U.S. 2004/0031030	Filed: February 5, 2001; Published: February 12, 2004	Kidder
U.S. 2005/0198247	Filed: September 10, 2004; Published: September 8, 2005	Perry
U.S. 2003/0097438	Filed: October 15, 2001; Published: May 22, 2003	Bearden
U.S. 2003/0046427	Filed: April 22, 2002; Published: March 6, 2003	Goringe
WO1998018306	Filed: October 27, 1997; Published: May 7, 1998	Ekstrom
WO2001076194	Filed: February 16, 2001; Published: October 11, 2001	Barrett
WO2001086844	Filed: May 7, 2001; Published: November 15, 2001	Ball
GB2362302	Filed: May 8, 2000; Published: November 14, 2001	Tams
EP1088425	Filed: May 1, 1999; Published: April 4, 2001	Desnoyers
EP1102433	Filed: November 14, 2000; Published: May 23, 2001	Sundaram
EP1006690	Filed: November 30, 1999; Published: June 7, 2000	Fortin
CN1238618	Filed: March 30, 1999; Published: December 15, 1999	Song

Publication	**Date(s)**	**Short Name**
An Algorithm for Automatic Topology Discovery of IP Networks	June 1998	Lin
Introduction to Switch Technology: Improving the Performance of Ethernet Networks	December 2000	Thomas
Network Analysis 101: The Basic Flow of Data	July 1999	Chappell

Total SNMP: Exploring the Simple Network Management Protocol	1998	Harnedy
Internet Control Message Protocol	1981	Postel
A Simple Network Management Protocol (SNMP), Request for Comments: 1157	1990	Case
Introduction to Community-based SNMPv2	January 1996	Case-2
SNMP Communications Service, Request for Comments: 1270	October 1991	Kastenholz
Management Information Base for Network Management of TCP/IP-based Internets: MIB-II	1991	McCloghrie
A Primer on Internet and TCP/IP Tools and Utilities	1997	Kessler
ICMP Router Discovery Messages	September 1991	Deering
AIX NetView/6000	1992	Chou

5. 512 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 512 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	**Date of Publication / Application / Issue**	**Short Name**
U.S. 7,068,607	Provisional filed: August 31, 2000; Issued: June 27, 2006	Partain
U.S. 7,415,504	Provisional filed: February 26, 2001; Issued: August 19, 2008	Schiavone
U.S. 2005/0159167	PCT filed: March 25, 2002; Published: July 21, 2005	Hakalin
U.S. 6,701,149	Provisional filed: July 19, 1999; Issued: March 2, 2004	Sen
U.S. 7,477,609	PCT filed: January 10, 2002; Issued: January 13, 2009	Agin

U.S. 5,678,178	PCT filed: June 30, 1993; Issued: October 14, 1997	Tahkokorpi
U.S. 5,844,886	Filed: December 30, 1996; Issued: December 1, 1998	Szentesi
U.S. 6,760,303	Filed: March 29, 2000; Issued: July 6, 2004	Brouwer
U.S. 6,968,192	Filed: June 7, 2001; Issued: November 22, 2005	Longoni
U.S. 7,133,676	Filed: August 24, 2001; Issued: November 7, 2006	Iguchi
U.S. 7,542,779	PCT filed: October 9, 2001; Issued: June 2, 2009	Halonen779
U.S. 7,356,037	PCT filed: February 10, 1999; Issued: April 8, 2008	Bruenle
WO 2002/032174	Filed: October 9, 2001; Published: April 18, 2002	Halonen
WO 2002/052869	Filed: December 27, 2001; Published: July 4, 2002	Satt
WO 2002/032173	Filed: October 9, 2001; Published: April 18, 2002	Ramos
WO 2003/096733	PCT filed: May 8, 2002; Published: November 20, 2003	Lakkakorpi
WO 2001/099340	PCT filed: June 19, 2001; Published: December 27, 2001	Heiner
WO 2003/055167	PCT filed: December 21, 2001; Published July 3, 2003	Tuulos
P2000-78146A	Filed: August 28, 1998; Published: March 14, 2000	Sato
P2000-197088A	Filed: December 25, 1998; Published: July 14, 2000	Inaba
GB2350025A	Filed: March 11, 1997; Published: November 15, 2000	Kanai
EP1156693A1	Filed: December 27, 2000; Published: November 21, 2001	Takao
CN1352508	Filed: November 2, 2001; Published: June 5, 2002	Kim
EP1418782	Filed: June 11, 2002 Published: May 12, 2004	Meago

Publication	**Date(s)**	**Short Name**
Performance Evaluation of Common Radio Resource Management (CRRM)	No later than May 2, 2002	Tolli

In addition to the above, Huawei contends that the Asserted Claims of the 512 Patent are invalid in light of the claims of U.S. Pat. App. 10/528,080 (now U.S. Pat. No. 7,305,241) and the doctrine of obviousness-type double patenting.

6. 973 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 973 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 2004/0032827	Filed: August 15, 2002; Published: February 19, 2004	Hill
U.S. 2005/0138197	Filed: December 19, 2003; Published: June 23, 2005	Venables
U.S. 2005/0147032	Provisional filed: December 22, 2003; Published: July 7, 2005	Lyon
U.S. 6,256,674	Provisional filed: July 19, 1995; Issued: July 3, 2001	Manning
U.S. 2004/0257991	Filed: June 20, 2003; Published: December 23, 2004	Sterne
U.S. 8,072,887	Filed: February 7, 2005; Issued: December 6, 2011	Siva
U.S. 2003/0123393	Filed: January 3, 2002; Published: July 3, 2003	Feuerstraeter
U.S. 5,402,416	Filed: January 5, 1994; Issued: March 28, 1995	Cieslak
U.S. 7,420,919	Filed: November 10, 2003; Issued: September 2, 2008	Toudeh-Fallah
U.S. 2004/0136379	Provisional filed: March 13, 2000; Published: July 15, 2004	Liao
U.S. 5,898,671	Provisional filed: September 14, 1995; Issued: April 27, 1999	Hunt
U.S. 6,775,293	Filed: June 30, 2000; Issued: August 10, 2004	Robotham
U.S. 6,859,435	Provisional filed: October 13, 1999; Issued: February 22, 2005	Lee
U.S. 6,922,390	Filed: June 15, 1999; Issued: July 26, 2005	Chapman

U.S. 6,973,032	Filed: December 4, 2000; Issued: December 6, 2005	Casley
U.S. 2004/0071086	PCT filed: November 20, 2001; Published: April 15, 2004	Haumont
U.S. 2007/0058651	Filed: August 30, 2005; Published: March 15, 2007	Bowen
U.S. 2006/0164979	Filed: January 24, 2005; Published: July 27, 2006	Pirbhai
U.S. 2006/0164989	Filed: January 24, 2005; Published: July 27, 2006	Hart
U.S. 2007/0133419	Filed: December 13, 2005; Published: June 14, 2007	Segel

Publication	**Date(s)**	**Short Name**
SIFT: A simple algorithm for tracking elephant flows, and taking advantage of power laws	September 2005	Psounis
IEEE Standard 802.3-2005, "IEEE Standard for Information technology – Telecommunications and Information Exchange between Systems – Local and Metropolitan Area Networks – Specific Requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access method and Physical Layer Specification"	December 2005	IEEE 802.3-2005
The War between Mice and Elephants	November 2001	Guo

7. 224 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 224 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	**Date of Publication / Application / Issue**	**Short Name**
CN101052208	Filed: April 6, 2006; Published:	Yong

	October 10, 2007	
WO2007078042	Filed: September 12, 2006; Published: July 12, 2007	Lee
U.S. 7,013,141	Filed: March 29, 2004; Issued: March 14, 2006	Lindquist
U.S. 2008/0268849	Filed: April 30, 2007; Published: October 30, 2008	Narasimha
WO2008042906	Filed: October 2, 2007; Published: April 10, 2008	Kitazoe
WO2007089128	Filed: February 5, 2007; Published: August 9, 2007	Jeong
U.S. 2007/0099618	Filed: October 31, 2006; Published: May 3, 2007	Kim
U.S. 2002/0068566	Filed: August 17, 2001; Published: June 6, 2002	Ohlsson
U.S. 2005/0048974	Filed: December 22, 2003; Published: March 3, 2005	Kim

Publication	**Date(s)**	**Short Name**
R3-072191 - Measurements for Handover Decision Use Case	November 2007	R3-072191
R2-062235 - LTE Handover Preparation	August 2006	R2-062235
R3-082099 - Multiple Handover Preparations	August 2008	R3-082099
R3-082684 – Discussion on X2 Handover Cancel	September 2008	R3-082684
R2-062289 – Proffer/Bid Based Handover Preparation	August 2006	R2-062289
R3-051203 – Forwarding Mechanism for Intra-Access System Handover	November 2005	R3-051203
R3-060028 – Forwarding Mechanism for Intra-Access System Handover	January 2006	R3-060028
R3-070213 – The Handover Preparation Procedure for S1AP	February 2007	R3-070213
R3-081158 – Specific Cause Value for X2 Handover Preparation Failure	May 2008	R3-081158
3GPP Technical Specification 36.413 V8.3.0	2008	3GPP 36.413
3GPP Technical	2008	3GPP 36.401

Specification 36.401 V8.3.0		
3GPP Technical Specifiation 36.300 V8.5.0	June 2008	3GPP 36.300

8. 112 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 112 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 5,764,651	Filed: May 17, 1996; Issued: June 9, 1998	Bullock
U.S. 2003/0134656	Filed: January 14, 2003; Published: July 17, 2003	Chang
U.S. 2005/0222814	PCT filed: March 11, 2003; Published: October 6, 2005	Nicholls
U.S. 2002/0141332	Provisional filed: December 11, 2000; Published: October 3, 2002	Barnard
U.S. 2003/0161355	Provisional filed: December 21, 2001; Published: August 28, 2003	Falcomato
U.S. 6,775,799	Filed: March 17, 2000; Issued: August 10, 2004	Giorgetta
U.S. 6,775,237	Filed: May 29, 2001; Issued: August 10, 2004	Soltysiak
U.S. 5,627,837	Filed: August 23, 1994; Issued: May 6, 1997	Gillett
U.S. 2002/0138796	Filed: March 23, 2001; Published: September 26, 2002	Jacob
U.S. 2003/0120983	Filed: December 26, 2001; Published: June 26, 2003	Vieregge
U.S. 6,933,852	Filed: March 11, 2002; Issued: August 23, 2005	Kitajima
U.S. 6,583,903	Filed: March 2, 2000; Issued: June 24, 2003	Way903
U.S. 7,269,347	Filed: May 28, 2003; Issued: September 11, 2007	Matricardi
U.S. 5,491,687	Filed: September 28, 1994; Issued: February 13, 1996	Christensen
U.S. 6,148,423	Filed: June 7, 1995;	Le Mouel

	Issued: November 14, 2000	
U.S. 6,252,502	Filed: September 23, 1999; Issued: June 26, 2001	Kubo
U.S. 2004/0103350	Filed: November 27, 2002; Published: May 27, 2004	Pham
U.S. 2004/0218919	Filed: April 30, 2003; Published: November 4, 2004	Hunsche
U.S. 2002/0080445	Provisional filed: July 21, 2000; Published: June 27, 2002	Falkenstein
WO2001/065733	Filed: February 28, 2001; Published: September 7, 2001	Way
H10-117181A	Filed: October 11, 1996; Published: May 6, 1998	Ohira
P2001-203673	Filed: January 20, 2000; Published: July 27, 2001	Ando
EP1175034A2	Filed: July 2, 2001; Published: January 23, 2002	McDermott

Publication	**Date(s)**	**Short Name**
ITU-T G.806 (10/2000) "Characteristics of transport equipment - Description methodology and generic functionality"	Dated: October 2000; Published: No later than September 12, 2001	G.806
ITU-T G.841 (10/98) "Types and characteristics of SDH network protection architectures"	Dated: October 1998; Published: No later than June 30, 1999	G.841
ITU-T G.783 (10/2000) "Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks"	Dated: October 2000; Published: No later than December 7, 2001	G.783
ITU-T G.826 (12/2002) "End-to-end error performance parameters and objectives for international, constant bit-rate digital paths and connections"	Dated: December 2002; Published: No later than April 16, 2003	G.826
Link Failure Detection for Maintaining Session Continuity in Packet Data Networks	Published: July 1995	Kumar
Common Equipment Management Function	No later than February 9, 2000	D.61

Requirements D.61(WP3/15)		
Draft EN 301 167 V1.1.1 (1998-04) "Transmission and Multiplexing (TM); Management of Synchronous Digital Hierarchy (SDH) transmission equipment; Fault management and performance monitoring; Functional description	Published: 1998	EN301167

9. 199 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 199 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 5,745,520	Filed: March 15, 1996; Issued: April 28, 1998	Love
U.S. 6,181,738	Filed: February 13, 1998; Issued: January 30, 2001	Chheda
U.S. 7,027,420	Filed: July 24, 2001; Issued: April 11, 2006	Hamalainen 420
U.S. 6,763,244	Filed: March 15, 2001; Issued: July 13, 2004	Chen 244
U.S. 6,650,904	Filed: December 16, 1999: Issued: November 18, 2003	Lin
U.S. 6,711,150	Filed: April 7, 2000; Issued: March 23, 2004	Vanghi
U.S. 6,463,295	Filed: February 6, 1998; Issued: October 8, 2002	Yun 295
U.S. 2004/0009767	Filed: April 4, 2003; Published: January 15, 2004	Lee
U.S. 2004/0203475	Filed: September 25, 2002; Published: October 14, 2004	Gaal
U.S. 2006/0023650	Filed: July 30, 2004; Published: February 2, 2006	Dominique
U.S. 2004/0146023	Filed: November 7, 2003; Published: July 29, 2004	Pietraski
U.S. 2005/0243855	Filed: April 30, 2004; Published: November 3, 2005	Dominique

U.S. 2003/0103585	Filed: November 19, 2002; Published: June 5, 2003	Kim
U.S. 2003/0081572	Filed: October 30, 2002; Published: May 1, 2003	Youn-Sun Kim
U.S. 2005/0113106	Filed: June 10, 2004; Published: May 26, 2005	Duan
U.S. 2003/0021243	Filed: July 24, 2001; Published: January 30, 2003	Hamalainen
U.S. 2003/0206541	Filed: May 1, 2003; Published: November 6, 2003	Yun
U.S. 2004/0110473	Filed: December 3, 2003; Published: June 10, 2004	Rudolf
U.S. 2003/0156556	Filed: February 21, 2002; Published: August 21, 2003	Puig-Oses
U.S. 2002/0165004	Filed: March 15, 2001; Published: November 7, 2002	Chen
U.S. 2005/0180344	Filed: July 30, 2004; Published: August 18, 2005	Sternberg
U.S. 2003/0050084	Filed: January 4, 2002; Published: March 13, 2003	Damnjanovic
U.S. 2003/0161285	Filed: February 25, 2002; Published August 28, 2003	Tiedemann
FR2842048	Filed: July 2, 2002; Published: January 9, 2004	Jard
WO2002075955	Filed: March 15, 2002; Published: December 17, 2003	Tao Chen
EP1108294	Filed: June, 28, 2000; Published: June 20, 2001	Hwang
EP0685129	Filed: February 1, 1994; Published: December 6, 1995	Padovani
EP1476973	Filed: February 19, 2003; Published: November 17, 2004	Gaal
EP1665574	Filed: July 29, 2004; Published: June 7, 2006	Koo
EP1062742	Filed: March 5, 1999; Published: December 27, 2000	Jacobson
EP1256190	Filed: February 13, 2001; Published: November 11, 2002	Tao Chen-190
WO2004059872	Filed: September 19, 2003; Published; July 15, 2004	Yazhu Ke
WO2004051872	Filed: December 2, 2003; Published: June 17, 2004	Dick 872
WO2004032374	Filed: October 1, 2002; Published: April 15, 2004	Miyamoto
WO2001017158	Filed: August 31, 2000; Published:	Chen 158

	March 8, 2001	
WO2004036809	Filed: October 16, 2003; Published: April 29, 2004	Dick 809
WO2004114549	Filed: June 10, 2004; Published: December 29, 2004	Zhou
KR20000031563	Filed: November 7, 1998; Published: June 5, 2000	Won Lee
KR20030080165	Filed: April 6, 2002; Published: October 11, 2003	Yeong Lee

Publication	Date(s)	Short Name
3GPP C.S0001-D - Introduction to CDMA2000 Spread Spectrum Systems	February 2004	Introduction to CDMA2000
Medium Access Control (MAC) Standard for cdma2000 Spread Spectrum Systems, Release D, v.1.0	February 2004	CDMA2000 Specification

10. 446 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 446 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 2006/0198635	Filed: March 4, 2005; Published: September 7, 2006	Emery
U.S. 2006/0093356	Filed: July 21, 2005; Published: May 4, 2006	Vereen
U.S. 2008/0138062	Provisional filed: December 8, 2006; Published: June 12, 2008	Tyrrell
U.S. 2010/0067901	Filed: February 26, 2009; Published: March 18, 2010	Mizutani
U.S. 2008/0138064	Filed: December 12, 2006; Published: June 12, 2008	O'Byrne
U.S. 2009/0060496	Filed: August 31, 2007; Published: March 5, 2009	Liu
U.S. 2010/0074614	Filed: September 19, 2008; Published: March 25, 2010	DeLew
U.S. 2008/0056719	Filed: September 1, 2006;	Bernard

	Published: March 6, 2008	
U.S. 2007/0147836	Filed: December 12, 2006; Published: June 28, 2007	Dong
U.S. 2007/0274719	Filed: January 3, 2007; Published: November 29, 2007	Ferguson
U.S. 2008/0212964	PCT filed: September 22, 2006; Published: September 4, 2008	Gao
U.S. 2009/0016713	Filed: July 13, 2007; Published: January 15, 2009	Liu713
WO 2007/123692	Filed: March 30, 2007; Published: November 1, 2007	DeLew692
P2007-318524	Filed: May 26, 2006; Published: December 6, 2007	Miyoshi
P2007-194983	Filed: January 20, 2006; Published: August 2, 2007	Eguchi

Publication	**Date(s)**	**Short Name**
Report of Rapporteur's Meeting (Piscatawy, NJ, USA, 25 May 2006)_TD 135 (WP 1/15)	Published: September 18, 2006	TD135
Living List for Recommendation G.984.3 Amendment 3_TD 146 (WP 1/15)	Published: October 16, 2006	TD146
Draft revised G.984.3 (for consent)_TD 507 R2 (PLEN/15)	Published: February 3, 2008	TD507
SmartAX MA5603T Multi-service Access Module V800R007C00 Feature Description Issue 01	No later than December 01, 2009	MA5603T Feature Description

11. 727 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 727 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	**Date of Publication / Application / Issue**	**Short Name**
U.S. 6,775,799	Filed: March 17, 2000; Issued:	Giorgetta

	August 10, 2004	
U.S. 5,699,348	Filed: October 31, 1995; Published: December 16, 1997	Baidon
U.S. 6,891,828	Filed: June 30, 2000; Issued: May 10, 2005	Mahesh
U.S. 6,795,451	Filed: March 17, 2000; Issued: September 21, 2004	Giorgetta-451
U.S. 6,983,414	Filed: March 30, 2001; Issued: January 3, 2006	Duschatko
U.S. 7,197,052	Filed: April 22, 2002; Issued: March 27, 2007	Crocker
U.S. 2002/0108081	Filed: December 20, 2000; Published: August 8, 2002	Mitlin
U.S. 2001/0055319	Filed: February 9, 2001; Published: December 27, 2001	Quigley
U.S. 2001/0053225	Filed: January 29, 2001; Published: December 20, 2001	Ohira
CA2301383	Filed: March 20, 2000; Published: October 13, 2000	Weis

Publication	**Date(s)**	**Short Name**
ITU-T SG 13 – New Recommendation on OTN Transmission Performance	February 2001	ITU-T SG 13
TR-005 – ADSL Network Element Management	March 1998	TR-005
G.826 – Error Performance Parameters and Objectives for International, Constant Bit Rate Digital Paths At Or Above the Primary Rate	February 1999	G.826 Error Performance Parameters
G.828 – Error Performance Parameters and Objectives for International, Constant Bit Rate Synchronous Digital Paths	March 2000	G.828 Error Performance Parameters
Definitions of Managed Objects for the ADSL Lines	August 1999	Definitions of Managed Objects
Transmission of Framed ATM Cell Streams over Satellite: A Field Experiment	June 1995	Transmission of Framed ATM Cell Streams
A Review of Error Performance Models for Satellite ATM Networks	July 1999	Review of Error Performance Models
Uses of In-Service	November 1989	Uses of In-Service

Monitoring Information to Estimate Customer Service Quality		Monitoring
DVB Interfaces to Plesiochronous Digital Hierarchy (PDH) Networks	Decemebr 1997	DVP Interfaces
DVB-T Single Chip Demodulator Application Note	November 1998	DVB-T
Working Document 11-99-10 (16)	October 1999	Working Document 11-99-10

12. 480 Patent

Huawei contends that the following prior art patents and publications anticipate and/or render obvious one or more Asserted Claims of the 480 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(e) (all pre-AIA), and/or 35 U.S.C. § 103.

Patent Number	Date of Publication / Application / Issue	Short Name
U.S. 2008/0002688	Filed: April 25, 2007; Published: January 3, 2008	Kim
U.S. 2007/0177630	Provisional filed: November 30, 2005; Published: August 2, 2007	Ranta
U.S. 2006/0256757	Provisional filed: April 26, 2005; Published: November 16, 2006	Kuusela
U.S. 2007/0291797	Filed: June 19, 2006; Published: December 20, 2007	Rao
U.S. 2009/0022098	PCT filed: October 23, 2006; Published: January 22, 2009	Novak
U.S. 2010/0157916	Provisional filed: October 2, 2006; Published: June 24, 2010	Kim916

Publication	Date(s)	Short Name
TS36.321, V1.0.0 (2007-09)	Published: September 2007	TS36.321
TS36.300, V8.1.0 (2007-06)	Dated: June 2007; Published: July 2007	TS36.300
TS36.213, V8.0.0 (2007-09)	Published: September 2007	TS36.213
R2-061900	Published: June 22, 2006	CATT900
R2-072401	Published: June 22, 2007	Nokia401
R2-070020	Published: January 12, 2007	Nokia020
R2-072741	Published: June 22, 2007	LG741

R2-074183	Published: October 2, 2007	Nokia183
R2-070115	Published: January 12, 2007	CATT115
R2-070476	Published: February 9, 2007	Nokia476
R2-073912	Published: October 2, 2007	Nokia912
R2-073388	Published: August 14, 2007	Samsung388
R1-060591	Published: February 7, 2006	Nokia591
R2-074358	Published: October 2, 2007	Philips358
R1-074256	Published: October 3, 2007	Philips256
Principle and Performance of Semi-persistent Scheduling for VoIP in LTE System	Published: September 2007	Jiang
HSDPA/HSUPA for UMTS high speed radio access for mobile communications	Published: May 2006	Holma

To the extent that any of the patents or publications above describe systems, apparatuses, or methods that were implemented, built, used, or reduced to tangible form, Huawei reserves the right to rely upon such systems, apparatuses, or methods as independent basis for prior art. Citations to disclosures within these prior art systems should be construed to also comprise citations to the corresponding functionality in the relevant system, apparatus, or method.

On information and belief, each document or item listed above is prior art at least as early as the dates set forth therein. Exhibits A-L include exemplary claim charts of certain prior art references providing exemplary citations identifying where each limitation of each Asserted Claim is found in the prior art.

To the extent any limitation of any of the Asserted Claims is construed to have a similar meaning, or to encompass similar feature(s) and/or function(s) with any other claim limitation of any of the Asserted Claims, as apparently contended by Plaintiff in its Infringement Contentions, or if later determined by the Court, and to the extent at least one chart in Exhibits A-L identifies any prior art reference, or a portion thereof, as disclosing or teaching such similarly construed claim limitation, such identified prior art reference, or the portion thereof, are incorporated by

reference, and are part of Defendant's Invalidity Contentions with respect to each of the Asserted Claims that includes such similarly construed claim limitation.

To the extent that they constitute prior art, Defendant reserves the right to rely upon foreign counterparts of the U.S. patents and patent applications identified in Defendant's Invalidity Contentions; U.S. counterparts of foreign patents and patent applications identified in Defendant's Invalidity Contentions; U.S. and foreign patents and patent applications corresponding to articles and publications identified in Defendant's Invalidity Contentions; and any systems, products, techniques, or prior inventions that relate to any references identified in Defendant's Invalidity Contentions.

The charts in Exhibits A-L provide exemplary sections within the prior art references that teach or suggest each and every element of the asserted claims. The references cited in the attached charts either alone or in combination render the Asserted Claims anticipated and/or obvious.

With regard to obviousness, the Supreme Court, in *KSR International Co. v. Teleflex Inc., et al*., 127 S. Ct. 1727, 1739 (2007) ("*KSR*"), held that a claimed invention can be obvious even if there is no explicit teaching, suggestion, or motivation for combining the prior art to produce that invention. Under *KSR*, patents that are based on new combinations of elements or components already known in a technical field may be found to be obvious. Specifically, the Court in *KSR* rejected a rigid application of the "teaching, suggestion, or motivation [to combine]" test. *Id*. at 1741. "In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim." *Id*. at 1741-42. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id*. at 1742. In particular, the Supreme

Court emphasized the principle that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id*. at 1739. A key inquiry is whether the "improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 1740.

The rationale to combine or modify prior art references is significantly stronger when the references seek to solve the same problem, come from the same field, and correspond well to each other. *In re Inland Steel Co.*, 265 F.3d 1354, 1362 (Fed. Cir. 2001). The Federal Circuit has held that two references may be combined as invalidating art under similar circumstances, namely "[the prior art] focus[es] on the same problem that the . . . patent addresses. Moreover, both [prior art references] come from the same field. Finally, the solutions to the identified problems found in the two references correspond well." *Id.* at 1364.

In view of the Supreme Court's *KSR* decision, the PTO issued a set of Examination Guidelines to its corps of Patent Examiners. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex, Inc.*, 72 Fed. Reg. 57526 (October 10, 2007). Those Guidelines summarized the *KSR* decision, and identified various rationales for finding a claim obvious, including those based on other precedents. Those rationales include:

> (A) Combining prior art elements according to known methods to yield predictable results;
>
> (B) Simple substitution of one known element for another to obtain predictable results;
>
> (C) Use of known technique to improve similar devices (methods, or products) in the same way;
>
> (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
>
> (E) "Obvious to try" – choosing from a finite number of identified,

> predictable solutions, with a reasonable expectation of success;
>
> (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
>
> (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 57529.

The alleged inventions of the Asserted Patents are obvious for one or more of the rationales under *KSR* and set forth above. A POSITA at the time of the alleged inventions of the Asserted Patents had reason to combine or modify one or more of the references listed and charted in Exhibits A-L, or identified in the tables above, in light of the knowledge of a POSITA at the time of the alleged inventions and information in the prior art cited herein. The references identified in Exhibits A-L and in the tables above are all in the same field as the Asserted Patents. A POSITA would have been motivated to combine any of the references cited in Exhibits A-L and would have further recognized that combinations of these references would have improved similar systems and methods in the same way. Additionally, a POSITA would recognize that the result of combining two or more of these references would have yielded nothing more than the predictable use of prior art elements according to their established functions. Further, a clear motivation existed in the art at the time of the alleged inventions to combine the references identified in Exhibits A-L to address any problems that the Asserted Patents sought to solve.

In addition to the references identified in Exhibits A-L and in the tables above, Huawei provides the following exemplary obviousness combinations. These exemplary obviousness combinations are not to be construed to suggest that any reference or activity in the combinations is not anticipatory on its own. These combinations are offered in the alternative and are should

only be construed as exemplary in nature as any prior art reference in the "Primary Prior Art" column may be combined with any other reference in that column or any reference in the "Combination Prior Art" column.

1. 627 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Kasdan	Bhandari. Suurballe, Jain-072, Voelker, Rajagopalan, Chaudhuri, Gan or Hjalmtysson
Gan	Bhandari. Suurballe, Jain-072, Voelker, Rajagopalan, Chaudhuri, Kasdan or Hjalmtysson
Ramamurthy	Bhandari. Suurballe, Jain-072, Voelker, Rajagopalan, Chaudhuri, Callon, or Hjalmtysson
Doverspike 671	Bhandari. Suurballe, Jain-072, Voelker, Rajagopalan, Chaudhuri, Callon, or Hjalmtysson
Allen	Bhandari. Suurballe, Jain-072, Voelker, Rajagopalan, Chaudhuri, or Hjalmtysson

2. 713 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Olson	Catalyst, Gai241, or Yamaya
Yamaya	Catalyst, Gai241, or Olson
Catalyst	Haviland, Gai241, Olson, or Yamaya
Haviland	Gai241, Catalyst, Olson, or Yamaya
Kodialam	Gai241, Catalyst, Olson, or Yamaya
Brackett	Dennis or Witkowski

3. 755 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Sylvain	Doverspike 417, Shabtay 027, Shabtay 991, Lang, Jain-072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II

Doverspike 417	Sylvain , Shabtay 027, Shabtay 991, Lang, Jain-072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II
Shabtay 027	Doverspike 417, Sylvain, Shabtay 991, Lang, Jain-072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II
Lang	Sylvain , Shabtay 027, Shabtay 991, Doverspike 417, Jain-072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II
Shabtay 991	Doverspike 417, Shabtay 027, Sylvain, Lang, Jain-072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II
Owens	Sylvain , Shabtay 027, Shabtay 991, Lang, Jain-072, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink, or Lang II
Lang II	Sylvain , Shabtay 027, Shabtay 991, Lang, Jain 072, Owens, Marzo, Pointurier, Weil, Fant, Cedell, Charny, Hassink

4. 546 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Kekic	Jain-834, Moghe, Niemi, Lin, Hansen, Barnard, Case, Wu, Reisacher, or Kastenholz
Kracht	Jain-834, Moghe, Niemi, Lin, Hansen, Barnard, Case, Wu, Reisacher, or Kastenholz
Ekstrom	Jain-834, Moghe, Niemi, Lin, Hansen, Barnard, Case, Wu, Reisacher, or Kastenholz
Wu	Jain-834, Moghe, Niemi, Lin, Hansen, Barnard, Case, Reisacher, or Kastenholz

5. 512 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Halonen	Satt, Ramos, or Partain
Satt	Halonen, Ramos, or Partain

6. 973 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**

Hill	Lyon, Manning, Siva, Sterne, or IEEE 802.3-2005
Venables	Siva, Manning, Lyon, Sterne, or IEEE 802.3-2005
Lyon	Sterne, Hill, Manning, Siva, or IEEE 802.3-2005
Manning	Sterne, Hill, Lyon, Siva, or IEEE 802.3-2005
Feuerstraeter	Psounis or IEEE 802.3-2005

7. 224 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Ohlsson	Yong, Kim, TS 36.300, R3-072191, R3-082099, Narasima, or Kitazoe
Jeong	Yong, Kim, TS 36.300, R3-072191, R3-082099, Narasima, or Kitazoe

8. 112 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Bullock	Nicholls, Chang, Ohira, Vieregge, G.806, G.841, or G783
Ohira	Nicholls, Chang, Jacob , Gillett, G.806, G.841, or G783
Gillett	Jacob, Bullock, Vieregge, Ohira, Nicholls, Chang, G.806, G.841, or G783
Way	Ohira, Bullock, Gillett, Nicholls, Chang, Kitajima, Jacob, G.806, G.841, or G783
Vieregge	Ohira, Kitajima, Bullock, Nicholls, Chang, G.806, G.841, or G783
Barnard	Falcomato, Giorgetta, Soltysiak, G.806, G.841, or G783

9. 199 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Chen	CDMA2000 Specification, Puig-Oses, Dick 872, Tao Chen, Youn-Sun Kim, Lee, Tao Chen-190, Rudolf, Hamalainen, Duan, or Zhou

Rudolf	CDMA2000 Specification, Puig-Oses, Dick 872, Tao Chen, Youn-Sun Kim, Lee, Tao Chen-190, Chen, Hamalainen, Duan, or Zhou
Hamalainen	CDMA2000 Specification, Puig-Oses, Dick 872, Tao Chen, Youn-Sun Kim, Lee, Tao Chen-190, Chen, Rudolf, Duan, or Zhou

10. 446 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
O'Byrne	Bernard, Tyrrell, Vereen, Miyoshi, or Mizutani
Emery	Bernard, Tyrrell, Vereen, Miyoshi, O'Byrne, Liu, or Mizutani
Miyoshi	Liu, Bernard, Tyrrell, Vereen, O'Byrne, Emery, Mizutani, or DeLew
Mizutani	Bernard, Tyrrell, DeLew, Vereen, O'Byrne, Emery, or Miyoshi

11. 727 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
Giorgetta	ITU-T SG 13, Quigley, TR-005, G.826, G.828, or DVP Interfaces
Quigley	ITU-T SG 13, TR-005, G.826, G.828, or DVP Interfaces
Ohira	ITU-T SG 13, Quigley, TR-005, G.826, G.828, or DVP Interfaces
ITU-T SG 13	DVB-T, Quigley, TR-005, G.826, G.828, or DVP Interfaces
DVB-T	ITU-T SG 13, TR-005, G.826, G.828, or DVP Interfaces

12. 480 Patent

Exemplary Combinations	
Primary Prior art	**Combination Prior Art**
CATT183	Nokia476, Ranta, CATT115, or TS36.300
CATT115	Kuusela, Nokia476, Ranta, or TS36.300
Kuusela	Holma, Nokia401, CATT900, CATT183, or Nokia476
CATT900	Nokia401, TS36.300, TS36.321, Kuusela, or CATT183

Kim916	Kuusela, Nokia476, LG741, or TS36.300
Nokia591	Nokia476, Ranta, CATT115, TS36.300, or CATT900

A POSITA at the time of the alleged inventions of the Asserted Patents had reason to combine or modify one or more of the references listed in the tables above, in light of the knowledge of a POSITA at the time of the alleged inventions and information in the prior art cited herein. The references identified in the tables above are all in the same field as the Asserted Patents. A POSITA would have been motivated to combine any of the references cited in the tables above and would have further recognized that combinations of these references would have improved similar systems and methods in the same way. Additionally, a POSITA would recognize that the result of combining two or more of these references would have yielded nothing more than the predictable use of prior art elements according to their established functions. Further, a clear motivation existed in the art at the time of the alleged inventions to combine the references identified in the tables above to address any problems that the Asserted Patents sought to solve.

In addition to being disclosed in prior art patents and printed publications, systems disclosing the inventions as claimed or as asserted by Plaintiff were known to POSITAs. Below is a list of prior art systems of which Defendants are currently aware that disclose the inventions as claimed or as asserted by Plaintiff. Defendants intend to seek discovery on the specifics of the below system art and other system art that may be discovered. Defendants reserve the right to supplement these Invalidity Contentions on the discovery of relevant information relating to the system art.

- SunNet Manager, Sunsoft (1995)
- OpenView, Hewlett Packard (1999)
- Spectrum, Cabletron Systems (1998)

- WhatsUp Gold, Ipswitch, Inc. (2000)
- Products and devices that utilized Ethernet Flow Control defined in 802.3x
- TiMetra FlexPath, TiMetra (no later than 2003)
- Cyclone Series, Applied Micro Circuits (no later than 2000)
- Catalyst Series, Cisco System (no later than 1998)
- OptiX 155/622, Huawei (no later than 2001)
- Products and devices that utilized protection switching defined in ITU-T G series
- Products and devices that utilized flow control defined in IEEE 802.3
- Products and devices that utilized Pseudowire emulation edge to edge (PWE3) configuration defined in ITU-T Recommendations and/or IETF RFCs
- SmartAX MA5600T series, including but not limited to MA5603T, Huawei (no later than 2009)

Thus, all of the limitations of the Asserted Claims of the Asserted Patents were known in the art, and any differences between the subject matter of the Asserted Claims of the Asserted Patents and the prior art are such that the subject matter as a whole would have been obvious at the time the alleged inventions were made to a POSITA. Further, a POSITA would have been motivated to combine elements of any of these and similar references, such as those identified in the exhibits herein, and recognize that the combination of any of these references is a predictable use of elements known in the art to solve a known problem and a use of known techniques to solve a known problem in the same way.

B. Contentions Under 35 U.S.C. § 112 (pre-AIA)

1. The 627 Patent

Defendants contend that the Asserted Claims of the 627 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) for lacking a written description and/or enabling disclosure commensurate

with the alleged scope of the claims, and as being unduly vague and indefinite. The 627 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 627 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 627 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 627 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 627 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 627 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources in any shared risk group determined in step b)" (claim 1)
- "virtual topology" (claim 1)
- for at least one shared risk group, determining if any of the at least one shared risk group includes any of the first sequence of network resources(claim 1)
- "node requiring SRG transformation" (claim 4)

- "transforming the node requiring transformation into two interconnected nodes" (claim 4)
- "transforming any bi-directional link into the node requiring transformation" (claim 4)
- "performing a ND (node-disjointness) transformation of every node in the first path other than the Source node and the destination node." (claim 6)
- "the ND transformation of a node which has not been SRG transformed" (claim 7)
- "transforming the node into a respective interconnected pair of nodes, and providing for each such pair of nodes a respective forward unidirectional link and a respective reverse unidirectional link between the pair of nodes" (claim 7)
- "revising the at least one shared risk group to be less restrictive" (claim 22)
- "A processing platform-readable medium having code means stored thereon for instructing a processing platform to select multiple paths through a network represented by a network topology representing an interconnected set of network resources" (claim 29)
- "first code means for identifying a first path through the network topology from a source node to a destination node" (claim 29)
- "second code means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 29)
- "third code means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources in any shared risk group determined by the second code means" (claim 29)
- "fourth code means adapted to identify a second path through the virtual topology from the source node to the destination node" (claim 29)
- "means for maintaining or obtaining network topology information" (claim 30)
- "means for identifying a first path through the network topology from a source node to a destination node" (claim 30)
- "means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 30)

- "means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources in any shared risk group determined by the second code means" (claim 30)

- "means adapted to identify a second path through the virtual topology from the source node to the destination node" (claim 30)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

2. The 713 Patent

Defendants contend that the Asserted Claims of the 713 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) for lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 713 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 713 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 713 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 713 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 713 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 713 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "the switch fabric is configured to switch data having a destination address associated with a logical port associated with the second fabric access device to a link associated with the first fabric access device" (claim 5)

- "the switch fabric is further configured to include with the data a port address associated with the second fabric access device and the first fabric access device is configured to recognize from the port address that the data is associated with the second fabric access device and send the data to the second fabric access device via the second system interface" (claim 6)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

3. The 755 Patent

Defendants contend that the Asserted Claims of the 755 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) for lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 713 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 755 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 755 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 755 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 755 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 755 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "re-route traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claims 1, 13)

- "an originating network device" (claim 1)
- "switch over message" (claims 1, 5)
- "alternate path in the forward direction" (claim 1)
- "re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 1)
- "re-route traffic traveling along the bi-directional LSP in the backwards direction to the alternate path in the backwards direction based on the switch over message." (claims 5, 8)
- "means for receiving the switch over message" (claim 8)
- "means for re-routing traffic traveling along the bi-directional LSP in the backwards direction to the alternate path in the backwards direction based on the switch over message" (claim 8)
- "re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 13)
- "transmitting a Switch over message along the alternate path in the forward direction to a merging network device responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 13)
- "receiving the Switch over message; and re-routing traffic traveling along the bi-directional LSP in the backwards direction to the alternate path in the backwards direction based on the Switch over message" (claim 16)
- "receive traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 18)
- "receiving a Switch over message along the alternative path in the forward direction; and re-routing traffic traveling along a bi-directional LSP in a backwards direction to an alternate path in the backwards direction based on the switch over message" (claim 18)
- "means for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 20)
- "means for transmitting a Switch over message along the alternate path in the

forward direction to a merging network device responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 20)

- "means for receiving traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction; receiving a switch over message along the alternative path in the forward direction" (claim 23)

- "means for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claims 23, 25)

- "means for transmitting a switch over message, along the alternate path in the forward direction, for re-routing traffic traveling along the bi-directional LSP in a backward direction" (claims 23, 25)

- "means for re-routing traffic traveling along the bi-directional LSP in a backwards direction to the same alternate path in the backwards direction based on the switch over message" (claims 23, 25)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

4. The 546 Patent

Defendants contend that the Asserted Claims of the 546 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 546 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus,*

Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014). The 546 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 546 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 546 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 546 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 546 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "automatic discovery of network devices" (claim 1)
- "receiving a first appropriate response from a first device associated with said first network address" (claim 1)
- "determining if said first device provides routing capabilities" (claim 1)
- "making said first device available for selection for management by a network management system" (claim 1)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations

provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

5. The 512 Patent

Defendants contend that the Asserted Claims of the 512 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 512 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 512 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 512 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 512 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 512 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 512 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "receiving transport capacity information on a transport network, the transport network used to connect base stations of a radio network to a core network, comprising a transport capacity limit for the radio cell based on the transport capacity information" (claim 1)
- "a transport capacity limit (for a/the radio cell)" (claims 1, 11, 22, 23, 24, and 27)
- "a transport load of the transport network, the transport load of a connection from one base station of the radio network to another base station of the radio network" (claim 3 and 13)
- "the transport capacity limit of a radio cell" (claims 6 and 7)
- "wherein the adjusted radio capacity information on the radio cell is used when handling base station admission requests" (claims 9 and 16)
- "the radio cell" (claims 11 and 27)
- "the radio resources" (claims 11 and 22)
- "the transport network resources" (claims 11 and 24)
- "the available radio capacity of the radio cell" (claim 18)
- "the transport resource management unit is configured to determine a transport capacity limit for a radio cell based on the transport capacity information and to signal the transport capacity limit to the at least one base station to adjust the radio capacity information based on the transport capacity limit and to signal the adjusted radio capacity information to the radio resource management unit to manage radio resources of the radio network by using the signalled adjusted radio capacity information" (claim 22)
- "the radio network" (claim 22)

- "the transport capacity information" (claim 23)

- "adjust the radio capacity information on the radio cell based on a transport capacity limit determined based on the transport capacity information and signalled from the transport resource management unit . . . wherein the apparatus is a base station comprising the transport resource management unit" (claims 24 and 26)

- "signal the adjusted radio capacity information on the radio cell to the radio resource management unit for managing the radio resources by using the adjusted radio capacity information . . . wherein the apparatus is a base station comprising the radio resource management unit" (claims 24 and 25)

- "signal the adjusted radio capacity information on the radio cell to the radio resource management unit for managing the radio resources by using the adjusted radio capacity information" (claim 24)

- "An apparatus, comprising: a radio resource management unit . . . a transport resource management unit . . . wherein the transport resource management unit is configured to signal the transport capacity limit of the radio cell to the apparatus . . . wherein the apparatus is configured to signal the adjusted radio capacity information on the radio cell to the radio resource management unit to be used in managing radio resources" (claim 27);

- "the transport network" (claim 27)

- "receiving transport capacity information on a transport network, …, comprising a transport capacity limit for the radio cell based on the transport capacity information" (claim 1)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

6. The 973 Patent

Defendants contend that the Asserted Claims of the 973 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 973 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 973 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 973 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 973 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 973 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 973 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "A method for incorporating a queuing device as a lossless processing stage in a network device in a communications network between an upstream device and a

downstream device in the network device, comprising: . . . the queuing device acts as a discard point by discarding packets when the queue is full . . . sending a message to the upstream device to reduce a rate at which packets are sent to the queuing device to prevent the queue from filling, thereby preventing packet discarding and loss by the queuing device" (claim 1)

- "sending the message from the upstream device to an upstream network device to thereby control a rate at which the upstream device receives packets from the upstream network device" (claim 1)

- "A system for incorporating a queuing device as a lossless processing stage in a network device in a communications network between an upstream device and a downstream device in the network device, the system comprising: . . . the queuing device acts as a discard point by discarding packets when the queue is full . . . sending a message to the upstream device to reduce a rate at which packets are sent to the queuing device to prevent the queue from filling, thereby preventing packet discarding and loss by the queuing device" (claim 9)

- "a module for monitoring a depth of a queue in the queuing device, wherein the queue receives packets from the upstream device within the network device and the queuing device acts as a discard point by discarding packets when the queue is full, wherein the upstream device is a traffic manager" (claim 9)

- "a module for, if the depth of the queue passes a predetermined threshold, sending a message to the upstream device to reduce a rate at which packets are sent to the queuing device to prevent the queue from filling, thereby preventing packet discarding and loss by the queuing device" (claim 9)

- "a module for sending a message reporting the depth of the queue to the upstream device to thereby enable the upstream device to determine whether to reduce or increase the rate at which the upstream device sends packets to the queuing device" (claim 9)

- "a module for sending the message from the e stream device to an upstream network device to thereby control a rate at which the upstream device receives packets from the upstream network device" (claim 9)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve

their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

7. The 224 Patent

Defendants contend that the Asserted Claims of the 224 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 224 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 224 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 224 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 224 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 224 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 224 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written

description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "first measurement report containing an evaluation of signal quality from at least one candidate base station of said plurality of base stations for a handover" (claim 1)
- "initiating a first handover preparation by transmitting a first request to said first candidate base station" (claim 1)
- "determining if said first handover preparation has failed" (claim 1)
- "selecting a set of candidate base stations including at least some of said candidate base stations identified in said first measurement report" (claim 1)
- "initiating a second handover preparation" (claim 1)
- "said first and second request are indicative of a set of radio bearers used by said user equipment" (claim 1)
- "said second measurement report containing a second evaluation of signal quality of at least one of said set of candidate base stations" (claim 1)
- "statistics data collected from previous handover preparations related to said base station" (claim 4)
- "sending a third handover preparation to at least an alternative candidate base station from said third measurement report" (claim 6)
- "wherein said target base station is selected from said subset of candidate base stations which has accepted supporting said set of radio bearers being used by said user equipment" (claim 7)
- "wherein said target base station is selected from said subset of candidate base stations which have accepted supporting a maximum number of radio bearers from said set of radio bearers being used by said user equipment" (claim 10)
- "selecting said target base station from statistics collected from previous handover preparations" (claim 13)

To the extent Defendants provide claim charts for prior art references that disclose the

limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure consistent with the alleged scope of the claims and may be indefinite, and therefore invalid.

8. The 112 Patent

Defendants contend that the Asserted Claims of the 112 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 112 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 112 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 112 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 112 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 112 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims

may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 112 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "(c) analyzing said BER values using a BER hysteresis algorithm to check for an indication of BER degradation. . ." (claims 1 and 11)
- "in response to a determination that each of said recent ones of said collected BER values exceeds the predetermined BER threshold level, determining whether said collected BER values worsen over time" (claims 1 and 11)
- "(d) switching a transmission port in response to said indication of BER degradation" (claims 1 and 11)
- "An optical switch comprising a processor in a memory" (claim 11)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure with the alleged scope of the claims and may be indefinite, and therefore invalid.

9. The 199 Patent

Defendants contend that the Asserted Claims of the 199 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The

199 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 199 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 199 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 199 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 199 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 199 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "generating quality metrics from a decoding process for a received channel quality indicator (CQI)" (claim 1)
- "the long-term soft decision quality metrics are generated by filtering frame based quality metrics over a plurality of frames" (claim 1)
- "determining whether to dynamically adjust a CQI channel configuration based on the comparison" (claim 1)

- "generating the short-term quality metrics by accumulating a plurality of quality information from the decoding process over a CQI frame" (claim 5)

- "means for generating soft decision quality metrics from a decoding process for a received channel quality indicator (CQI)" (claim 9)

- "means for comparing at least one of quality metrics to a quality setting" (claim 9)

- "means for determining whether to dynamically adjust a CQI channel configuration based on the comparison" (claim 9)

- "the means for comparing compares one of the short-term quality metrics to the threshold quality setting" (claim 11)

- "the means for comparing compares one of the long-term quality metrics to the threshold quality setting" (claims 10, 12)

- "the means for generating quality metrics comprising a means for generating the short-term quality metrics by accumulating a plurality of quality information from the decoding process over a CQI frame" (claim 13)

- "generating quality soft decision metrics in a decoding process associated with a quality of the received channel quality indicator (CQI)" (claim 15)

- "determining whether to dynamically adjust at least one of a mode setting, a reverse link outer loop power control setting, or a repetition factor based on the comparison" (claim 15)

- "generating long-term metrics by accumulating a plurality of quality metrics over a period of more than one frames" (claim 15)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a

written description and/or enabling disclosure with the alleged scope of the claims and may be indefinite, and therefore invalid.

10. The 446 Patent

Defendants contend that the Asserted Claims of the 446 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 446 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 446 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 446 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 446 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 446 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 446 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written

description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "A method of regulating rogue behavior in an optical network component comprising an optical transmitter" (claim 1)
- "removing the suspect rogue flag from the register if it is determined that the output threshold was not exceeded in a monitoring window occurring after the suspect rogue flag has been set" (claim 1)
- "Apparatus for regulating rogue behavior in an optical transmission device" (claim 15)
- "an output indicator monitor, a register for storing a suspect rogue flag if the output indicator monitor detects that an output indicator threshold has been exceeded during a monitoring window" (claim 15)
- "a reader for reading the register to determine whether a suspect rogue flag has been set" (claim 15)
- "a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set" (claim 15)
- "a timer for timing the duration between a temporary disable command and an enable command" (claim 15)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure with the alleged scope of the claims and may be indefinite, and therefore invalid.

11. The 727 Patent

Defendants contend that the Asserted Claims of the 727 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 727 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 727 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 727 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 727 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 727 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 727 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "calculating said Performance Monitoring function by implementing a correlation of the information regarding said corrected and uncorrected blocks" (claims 1, 6, 7)

- "wherein said correlation of the information regarding said corrected and uncorrected blocks includes calculating information comprising: a defected base reference time period (SCS) or a time period where at least an uncorrected block (UB) has been detected; and a number of corrected errors (BCE) in a non-SCS base reference time period" (claims 1, 6, 7)

- "means for implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function" (claims 4, 5)

- "means for receiving blocks of data" (claims 4, 5)

- "means for obtaining data through the Forward Error Correction function carried out on the blocks of received data" (claims 4, 5)

- "means for classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 4, 5)

- "means for calculating the Performance Monitoring function by implementing a correlation of the information regarding said corrected and uncorrected blocks" (claims 4, 5)

- "implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function" (claims 6 and 7)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure with the alleged scope of the claims and may be indefinite, and therefore invalid.

12. The 480 Patent

Defendants contend that the Asserted Claims of the 480 Patent may be invalid under 35 U.S.C. § 112 (all pre-AIA) as lacking a written description and/or enabling disclosure

commensurate with the alleged scope of the claims, and as being unduly vague and indefinite. The 480 Patent, read in light of its specification and prosecution history, may fail to inform, with reasonable certainty, those skilled in the art about the scope of the alleged invention. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014). The 480 Patent may not enable a POSITA to practice the full scope of the alleged invention claimed without undue experimentation. The 480 Patent further may not enable a POSITA to practice the scope of the alleged invention set forth in Plaintiff's Infringement Contentions. The 480 Patent also may fail to provide sufficient guidance on aspects Plaintiff now asserts to be part of the alleged patented invention.

In its Infringement Contentions, Plaintiff appears to construe the Asserted Patent claims such that they may lack a corresponding disclosure in the patent specification and are different from what is disclosed in the 480 Patent. Accordingly, there may be a zone of uncertainty concerning the breadth and meaning of the claim terms such that a POSITA is unable to discern the scope of the Asserted Claims with reasonable certainty. Accordingly, the Asserted Claims may be rendered indefinite and lack adequate support within the meaning of 35 U.S.C. § 112 (pre-AIA).

Specifically, based on the claim terms identified below, at least the following Asserted Claims of the 480 Patent may be invalid under 35 U.S.C. § 112 (pre-AIA) as lacking a written description and/or enabling disclosure commensurate with the alleged scope of the claims, and as being indefinite:

- "detecting with a hybrid automatic repeat request function a collision between an uplink packet re-transmission and a new uplink packet transmission within a hybrid automatic repeat request process" (claim 1)

- "in response, the hybrid automatic repeat request function dynamically allocating resources for transmitting the new uplink packet transmission in a different hybrid automatic repeat request process that does not collide with the uplink packet re-transmission . . . wherein the resources are persistently allocated for

transmitting the new uplink packet transmission in the different hybrid automatic repeat request process" (claims 1 and 2)

- "detecting with a hybrid automatic repeat request function a collision between an uplink packet re-transmission and a new uplink packet transmission within a hybrid automatic repeat request process" (claim 5)

- "in response, the hybrid automatic repeat request function dynamically allocating resources for transmitting the new uplink packet transmission in a different hybrid automatic repeat request process that does not collide with the uplink packet re-transmission . . . where resources are persistently allocated for transmitting the new uplink packet transmission in the different hybrid automatic repeat request process" (claims 5 and 6)

- "a hybrid automatic repeat request functional unit configured to detect with a hybrid automatic repeat request function, a collision between an uplink packet re-transmission and a new uplink packet transmission within a hybrid automatic repeat request process" (claim 7)

- "in response, the hybrid automatic repeat request functional unit being configured to dynamically allocate resources for transmitting the new uplink packet transmission in a different hybrid automatic repeat request process that does not collide with the uplink packet re-transmission . . . wherein resources are persistently allocated for transmitting the new uplink packet transmission in the different hybrid automatic repeat request process" (claims 7 and 9)

- "responsive to receiving a dynamic allocation of a different hybrid automatic repeat request process, transmitting a new packet using the dynamically allocated different hybrid automatic repeat request process. . . persistently allocating a resource for transmitting the new packet transmission in the different hybrid automatic repeat request process" (claims 11 and 12)

- "the dynamic allocation of the different hybrid automatic repeat request process is received from a network element" (claims 13 and 16)

- "responsive to receiving a dynamic allocation of a different hybrid automatic repeat request process, transmitting a new packet using the dynamically allocated different hybrid automatic repeat request process. . . where a resource is persistently allocated for transmitting the new packet transmission in the different hybrid automatic repeat request process" (claims 14 and 15)

- "responsive to receiving a dynamic allocation of a different hybrid automatic repeat request process, the hybrid automatic repeat request functional unit

configured to transmit a new packet using the dynamically allocated different hybrid automatic repeat request process. . . wherein the dynamic allocation comprises a resource is persistently allocated for transmitting the new packet transmission in the different hybrid automatic repeat request process" (claims 17 and 18)

- "a receiver configured to receive the dynamic allocation of the different hybrid automatic repeat request process from a network element" (claim 19)

To the extent Defendants provide claim charts for prior art references that disclose the limitations above, Defendants' contentions are based on the apparent meaning of these limitations provided by Plaintiff in its Infringement Contentions. By providing claim charts for prior art references that disclose the limitations above, Defendants do not waive and specifically preserve their contention that these limitations and the claims in which these limitations appear may lack a written description and/or enabling disclosure with the alleged scope of the claims and may be indefinite, and therefore invalid.

C. Contentions Under 35 U.S.C. § 101

Defendants also contend that the Asserted Claims of the Asserted Patents are invalid under 35 U.S.C § 101 because they are not directed to patent-eligible subject matter. Whether an invention is eligible for patent protection under 35 U.S.C. § 101 is a "threshold test." *See Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010). Under this "threshold test," the court "must first determine whether the claims at issue are directed to a patent-ineligible concept," such as an abstract idea. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l,* 134 S. Ct. 2347, 2355 (2014). If so, the court must then "consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application." *See id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.,* 132 S. Ct 1289, 1297 (2012)).

In *Alice,* the Supreme Court set forth a two-part test to analyze patent eligibility: (1) determine whether the claims are directed to an abstract idea or other patent-ineligible concept; and (2) if so, determine whether the claim amounts to "significantly more" than the abstract idea. If the claim does not recite "significantly more" than the abstract idea, it is invalid. *Id.* at 2355.

The first step of the *Alice* test requires the Court to ask whether the claim is "directed to a patent-ineligible concept," such as an abstract idea. *Id.* An idea is abstract if it has "no particular concrete or tangible form." *Ultramercial, Inc. v. Hulu, LLC,* 772 F.3d 709, 715 (Fed. Cir. 2014). A telling and common feature of an abstract idea is that its elements are the equivalent of human work that can be performed without a computer. A method that "can be performed in the human mind, or by a human using a pen and paper" "is merely an abstract idea and is not patent-eligible under § 101." *CyberSource Corp. v. Retail Decisions, Inc.,* 654 F.3d 1366, 1372-73 (Fed. Cir. 2011); *see also Gottschalk v. Benson,* 409 U.S. 63, 67 (1972) (method that "can be done mentally" was an abstract idea). Furthermore, the fact that a computer can expedite a mental process does not turn an abstract idea into something patent-eligible. *See Bancorp,* 687 F.3d at 1279 ("Using a computer to accelerate an ineligible mental process does not make that process patent-eligible.").

If the answer to the first question is yes, then the second step of the *Alice* framework requires the Court to determine whether there are "additional elements [that] 'transform the nature of the claim' into a patent-eligible application." *Alice,* 134 S. Ct. at 2355 (quoting *Mayo Collaborative Servs.,* 132 S. Ct. at 1296-97). The second step entails a search for an "'inventive concept'" "that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Id.* (quotation omitted). "Simply appending conventional steps, specified at a high level of generality, [is] not enough to supply an inventive concept" needed to make this transformation. *Id.* at 2357 (quotation omitted). Further, "[t]he

introduction of a computer into the claims does not alter the analysis." *Id.* Neither "stating an abstract idea while adding the words 'apply it,'" nor "limiting the use of an abstract idea to a particular technological environment," "is [] enough for patent eligibility." *Id.* at 2358 (quotation omitted). Further, the Federal Circuit has held that the "machine-or-transformation test" "can provide a 'useful clue' in the second step of the *Alice* framework." *Ultramercial,* 772 F.3d at 716.

Where the additional elements are "'well-understood, routine, conventional activit[ies]' previously known to the industry," the claim is not patent-eligible. *Alice,* 134 S. Ct. at 2359 (quoting *Mayo Collaborative Servs.,* 132 S. Ct. at 1294). Moreover, "[s]oftware may be patent eligible, but when a claim is not directed towards a process, the subject matter must exist in tangible form." *Allvoice Developments US, LLC v. Microsoft Corp.,* No. 2014-1258 (Fed. Cir. May 22, 2015). "Except for process claims, the eligible subject matter must exist in some physical or tangible form." *See id.* (citations omitted). Where the claim elements are all software elements that do not expressly require hardware elements, the claim lacks subject matter eligibility. *Id.*

In determining patent eligibility under § 101, courts must focus on the claims. Disclosures in the specification will not save an otherwise abstract claim. *Dealertrack, Inc. v. Huber,* 674 F.3d 1315, 1334 (Fed. Cir. 2012).

One or more of the Asserted Claims is invalid under 35 U.S.C. § 101 as directed to patent ineligible subject matter because it is directed to an abstract idea and does not contain an inventive concept that amounts to substantially more than a claim directed to the abstract idea itself.

1. 627 Patent

Claims 1, 29, and 30 of the 627 Patent are directed to fundamental concepts of network traffic protection. These claims do not contain an inventive concept at least because the claims

recite nothing more than a conventional use case of well-known traffic network protection technologies and implementations, in which the network devices implementing traffic network protection technologies make use of it operate according to their known and conventional functions.

2. 713 Patent

Claims 1 and 5 of the 713 Patent are directed to a switch fabric access system. This subject matter amounts to no more than the application of fundamental concepts of the known switching and routing technology. For example, avoiding unavailable links while routing data packets is a conventional use case of the known switching and routing technology.

3. 755 Patent

Similar to the above-referenced claims of the 627 Patent, claims 1, 10, 13, 18, 20, 23, and 25 of the 755 Patent are directed to fundamental concepts of network traffic protection. These claims do not contain an inventive concept at least because the claims recite nothing more than a conventional use case of well-known traffic network protection technologies and implementations, in which the network devices implementing traffic network protection technologies make use of it operate according to their known and conventional functions.

4. 546 Patent

Claim 1 of the 546 Patent is directed to fundamental concepts of network device detection. This claim does not contain an inventive concept at least because the claim recites nothing more than a conventional use case of well-known device detection technologies and implementations, in which the network devices implementing device detection technologies make use of it operate according to their known and conventional functions.

5. 512 Patent

Claims 1, 11, 22, 23, 24, and 27 of the 512 Patent are directed to a method and apparatus for managing radio resources in a radio system. This subject matter amounts to no more than the application of fundamental concepts of the known radio resource management technology, in which the network devices implementing communication technologies make use of it operate according to their known and conventional functions. For example, a transport resource management unit and a radio resource management unit are well-known devices/functionalities in a radio network.

6. 973 Patent

Claims 1 and 9 of the 973 Patent are directed to a lossless processing system/method. This subject matter amounts to no more than the application of fundamental concepts of the known flow control technology. For example, adjusting a rate of packets or discarding packets when a queue is full is a conventional use case of the known flow control technology.

7. 224 Patent

Claim 1 of the 224 Patent is directed to fundamental communication concepts. This claim does not contain an inventive concept at least because the claims recite nothing more than a conventional use case of well-known communication concepts, methodologies, and implementations, in which the network devices implementing communication technologies make use of it operate according to their known and conventional functions.

8. 112 Patent

Claims 1 and 11 of the 112 Patent are directed to a method for switch protection. This subject matter amounts to no more than the application of fundamental concepts of the known switching technology. For example, making a switch to a new transmission port or issuing an

alarm in response to a degradation of bit error rate is a conventional use case of the known switch protection technology.

9. 199 Patent

Claims 1, 9, and 15 of the 199 Patent are directed to fundamental quality control concepts. These claims do not contain an inventive concept at least because the claims recite nothing more than a conventional use case of well-known quality control concepts, methodologies, and implementations, in which the network devices implementing quality control technologies make use of it operate according to their known and conventional functions.

10. 446 Patent

Claims 1 and 15 of the 446 Patent are directed to regulation of rogue behaviors of an optical network device. These claims recite little more than programmable processors, with generic components such as a "register," a "reader," a "determiner," and a "timer" that merely provide a generic environment in which to carry out an abstract idea, such as determining whether to perform a certain action (e.g., disable a transmitter) by checking whether an error has been recorded (e.g., a flag in a register).

11. 727 Patent

Claims 1, 4, 5, 6, and 7 of the 727 Patent are directed to fundamental quality control concepts. These claims do not contain an inventive concept at least because the claims recite nothing more than a conventional use case of well-known quality control concepts, methodologies, and implementations, in which the network devices implementing quality control technologies make use of it operate according to their known and conventional functions.

12. 480 Patent

Claims 1, 5, 7, 11, 14, and 17 of the 480 Patent are directed to automatic repeat request functionality (HARQ) and resource scheduling/allocation in wireless communication systems. This subject matter amounts to no more than the application of fundamental concepts of the known dynamic and semi-persistent/persistent scheduling of resources and HARQ technology.

Defendant's investigation is ongoing, but at least in view of the foregoing, Defendant contends that the above-referenced claims are invalid for claiming patent-ineligible subject matter under 35 U.S.C. § 101.

IV. TABLE OF EXHIBITS

Table of Exhibits	
Exhibit	**Description**
A	List of charted prior art references and invalidity charts for the 627 Patent
B	List of charted prior art references and invalidity charts for the 713 Patent
C	List of charted prior art references and invalidity charts for the 755 Patent
D	List of charted prior art references and invalidity charts for the 546 Patent
E	List of charted prior art references and invalidity charts for the 512 Patent
F	List of charted prior art references and invalidity charts for the 973 Patent
G	List of charted prior art references and invalidity charts for the 224 Patent
H	List of charted prior art references and invalidity charts for the 112 Patent
I	List of charted prior art references and invalidity charts for the 199 Patent
J	List of charted prior art references and invalidity charts for the 446 Patent

K	List of charted prior art references and invalidity charts for the 727 Patent
L	List of charted prior art references and invalidity charts for the 480 Patent

Dated: December 7, 2020

Respectfully submitted,

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SUBJECT TO ORDER GOVERNING PROCEEDINGS (DKT. NO. 22)

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing document was served on all counsel of record who are deemed to have consented to electronic service via electronic mail on December 7, 2020.

/s/ Jason W. Cook
Jason W. Cook